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Programme element II.d (i)

Matters left pending and other issues arising from the programme elements of the Intergovernmental Panel on Forests process

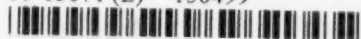
Issues that need further clarification: underlying causes of deforestation and forest degradation

Report of the Secretary-General

Summary

During the second session of the Intergovernmental Forum on Forests (IFF), Governments held background discussions on programme element II.d (i). Information on this subject was introduced (E/CN.17/IFF/1998/10), which referred to proposals for action addressed to countries by the Intergovernmental Panel on Forests (IPF) and contained information on United Nations Environment Programme activities to support their implementation.

Deforestation and forest degradation are widely recognized as one of the most critical environmental problems facing human society, with serious long-term economic, social and ecological consequences. During recent years, this issue has received much attention from policy makers as well as the general public, with vivid images of cleared forests and burning trees around the world. The effect of deforestation on biodiversity and climate change has been the subject of scientific studies and many documentaries.



The present report has been prepared to support substantive discussion on programme element II.d (i) during the third session of IFF. Section II contains a brief overview of major policy issues related to underlying causes, in particular forest-policy failures, market failures and other socio-economic factors influencing deforestation. Section III summarizes the major outcomes of the regional processes and of the Global Workshop on Underlying Causes of Deforestation and Forest Degradation held at San José, Costa Rica, in January 1999. Section IV contains conclusions and proposals for action, encompassing the socio-economic consequences of deforestation and the impacts of economic sectoral policies on the forest sector.

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I. Introduction

A. Mandate

1. Programme element II.d (i) was defined by the Intergovernmental Forum on Forests (IFF) at its first session as:

"Consider other issues arising from the programme elements of the Intergovernmental Panel on Forests process ..., inter alia, analysis of underlying causes, in particular international causes, including transboundary economic forces, of deforestation and forest degradation, taking into account the historical perspective and the pressures exerted on forests by other sectors, notably agriculture, in the quest for food security ..." (see E/CN.17/IFF/1997/4, para. 7, category II.d).

B. Guidance from the outcome of the second session of the Intergovernmental Forum on Forests

2. At its second session, IFF identified several considerations, including policy coordination inside and outside the forest sector, that were relevant for the preparation of the substantive discussion at the third session of IFF, and that would ensure policy consistency to overcome major obstacles when addressing the underlying causes of deforestation and forest degradation. Mechanisms for a fair and equitable share of benefits, including payment arising from the use of traditional technologies developed by indigenous people, forest owners and local communities for sustainable forest management, were also noted during the second session of IFF. The Forum welcomed the initiative on underlying causes of deforestation and forest degradation, including the Global Workshop to be held at San José, Costa Rica, from 18–22 January 1999, organized by non-governmental organizations, with the support of Costa Rica and the United Nations Environment Programme (UNEP).
3. At its second session, the Forum noted the importance of including in documentation for the third session issues related to, *inter alia*, macroeconomic and rural development policies, poverty, market forces, trade constraints, forest fires and civil strife. Distinction between underlying causes in forested countries and low forest-cover countries was also recommended. The examination of difficulties in the implementation of policies to combat deforestation and forest degradation, including the financial cost and institutional and technological requirements of such policies, in particular in developing countries, was stressed. The Forum requested that documentation for its third session should provide a comprehensive analysis and relevant proposals for enhancing international cooperation to address the underlying causes of deforestation and forest degradation.

C. General overview of the proposals for action of the Intergovernmental Panel on Forests

4. In terms of the underlying causes of deforestation, the IPF proposals for action urged all countries, with the support of international organizations and the participation of major groups, to take, *inter alia*, the following significant steps:
 - (a) *Case studies*: to undertake case studies using the diagnostic framework in order to identify the most important underlying causes of deforestation and forest degradation;

develop and test the usefulness of the framework as an analytical tool in assessing options for utilization of forest and forest lands; and refine the framework, disseminate the results and apply it more widely, as appropriate;

(b) *In-depth studies*: to prepare in-depth studies of the underlying causes at the national and international levels of deforestation and forest degradation; to analyse comprehensively the historical perspective of the causes of deforestation and forest degradation in the world, as well as other international underlying causes of deforestation and forest degradation, including transboundary economic forces;

(c) *Global workshop*: to support the convening, as soon as possible, of a global workshop on the international underlying causes of deforestation and forest degradation, and their relationship to national underlying causes;

(d) *Land tenure and benefit-sharing*: to formulate policies aiming at securing land tenure for local communities and indigenous people, including policies, as appropriate, aimed at the fair and equitable sharing of the benefits of forests;

(e) *National strategies*: to formulate and implement national strategies, through an open and participatory process, for addressing the underlying causes of deforestation, and if appropriate to define policy goals for national forest cover as inputs to the implementation of national forest programmes.

D. Scope

5. The present report summarizes the main policy-relevant information regarding issues involved in addressing the underlying causes of deforestation and forest degradation. The document has been prepared to support the substantive discussion on this topic at the third session of IFF, focusing on major policy issues, as well as policy and market failures related to underlying causes of deforestation. The report also presents a brief introduction to the major outcomes of the joint government-non-governmental organizations initiative on underlying causes of deforestation and forest degradation. The present report, prepared by the IFF secretariat, is based on inputs received from UNEP and the global secretariat of the government-non-governmental organizations initiative, in collaboration with member organizations of the informal, high-level Inter-Agency Task Force on Forests.

II. Brief overview of major policy issues related to underlying causes of deforestation

6. Although the world's forest area has been declining for centuries, in the last half of the twentieth century that process has accelerated to an alarming rate. Since the 1960s, there has been a major change in the rate at which forests are cleared. A recent study (FAO, 1997)¹ reports annual rates of deforestation in developing countries of 15.5 million hectares (ha) for the period 1980–1990 and 13.7 million ha for the period 1990–1995. The total forest area lost during the 15-year period was more than 220 million ha, an area much larger than the total land area of Mexico. Moreover, most of the deforestation is concentrated in relatively few countries. Food and Agriculture Organization of the United Nations (FAO) statistics indicate that the “top” 10 deforesting countries account for 7.4 million ha and more than half the annual deforestation, suggesting that if fundamental changes in land use can be made in those countries, it will have significant impacts on reducing forest loss.

7. In 1997 and 1998, forest fires caused serious forest loss in the world. The widespread fires were related to new commercial agricultural projects, land clearing for tree and agricultural plantations, land clearing for new cattle pastures, dry residues left in the forest after logging, and slash-and-burn agriculture. The unusually dry climate conditions caused by the El Niño phenomena further complicated the situation.

8. Despite the apparent precision of the figures/statistics for the rate of deforestation, the exact area of deforestation for each year is unknown. The accuracy of estimates is hampered by the lack of reliable time sequence land-use maps, different standards for forest and non-forest classification, inadequate ground validation of satellite imagery, and the institutional weaknesses of governmental forest departments around the world.

A. Policy failures

9. Policy failures in forestry and other sectors affecting forests are one of the most common causes of deforestation. Governmental policies are, perhaps, the most important factor in determining whether forests are to be sustainably used and managed. Logging concession policies, for example, have frequently resulted in inefficient use of forests as renewable resources. Concession periods, usually less than 20 years, are significantly shorter than natural regeneration periods of a timber stand (averaging 20 to 50 years). Also, rents through royalties, license fees and reforestation taxes are typically much lower than the real cost of replacing the timber stock and restoring logged areas. In addition, the Governments of most timber-exporting nations have generally been unable to collect full rent from log harvests through taxes and royalties. Aside from contributing to economic and environmental losses, such timber concessions can promote corruption and result in progressive decapitalization of the country's natural resource base.

10. By distorting the true costs or prices of forest resources, public policies often provide an incentive for short-term exploitation of forests. Public policies have frequently failed to provide adequate incentives for sustainable forest management or to promote reforestation. Pricing policies, tax incentives, direct government subsidies and other subsidies to encourage private investments in other sectors, such as agriculture, energy, mining, industry and transportation, have had major negative effect on forests. Such policies, by regulating prices and providing tax shelters and subsidized credits to livestock and agricultural producers, have expanded the agricultural frontier, often at the expense of natural forests.

11. Correcting the distortionary effects of inefficient incentive policies through proper regulations and land-use policies will improve forest use and reforestation, but improving market and price policies raises some difficult questions. One is that the externality costs (such as replacement and environmental costs resulting from harvesting) associated with forest use are not borne by the domestic economy alone; some have regional and global consequences. Sovereign Governments can be expected to address only domestic externalities in their pricing and taxation policies. Global externalities could be addressed through cooperation among nations, and perhaps through compensation arrangements between producers and beneficiaries of environmental and other services provided by forests.

12. In some countries, agricultural policies have also created incentives for deforestation. The commercialization of agriculture has typically led to monocultural plantations of export crops on fertile lowland areas; traditional farmers who once occupied those areas have been displaced onto more fragile uplands or natural forests. The concentration of shifting

cultivators on a smaller or poorer resource base typically sets in motion a downward spiral of reduced agricultural productivity, increased forest depletion and worsened rural poverty, as cropland fallow periods are shortened and soil fertility declines. An estimated 60 per cent of the world's poorest people have been pushed into ecologically fragile environments (tropical forests, drylands and hilly areas) as a result of agricultural expansion.

B. Market Failures

13. Market failure is another significant underlying cause of deforestation. The tropical natural forests are mostly publicly owned, and stumpages are then administratively priced by various fees and royalties, generally at lower levels than the markets would allow for. In privately owned natural forests, monopsonies or oligopsonies mostly create local market failures. The market failures of timber and fuelwood stumpages often go unnoticed.

14. The problem of valuing non-marketable environmental services is a good example of market failure. Perhaps biodiversity and carbon sequestration are the extreme cases to illustrate the situation in which benefits are mostly global but preservation costs local. These services, however, have missing global (global appropriation failure) and lower-level markets. While wood products' monetary values may have partly reflected the monetary value of the forests, the non-wood benefits have only exceptionally been materializing in the monetary value of the standing forest. The low monetary value of a standing forest is one factor that decreases investments in promoting the sustainable management of natural forests.

15. Inherent market failures have usually been compounded by government policy distortions. Rather than correcting the failure of the market, government interventions have often aggravated the existing incentives for excessive forest exploitation. Despite the national political will to seriously conserve forests, a policy mechanism for coordination is often missing. When the principal controls of deforestation — markets and public policies — are both failing, deforestation can only be expected to continue.

C. Other factors influencing deforestation

16. Population growth and rural poverty intensify the pressure to convert forest areas to other uses, as well as to exploit forests for short-term benefits. Human populations are growing rapidly, leading to growing domestic and international demands for primary goods and services from natural forests. With few exceptions, poverty and low incomes are also typical in countries with a high rate of deforestation. Due to the low productivity of agricultural land, the majority of the rural poor rely heavily on forests and woodlands for income and subsistence. While many traditional rural communities have developed comparatively sustainable forms of resource use, many others are compelled by circumstances often beyond their control to use forests unsustainably for short-term gains.

17. The low performance of the national economy in some developing countries, combined with high external debts, pushes countries to use forest resources unsustainably for short-term gains. External debt in developing countries is another underlying cause driving deforestation. Recent statistics show that 12 countries, which owe about half the total third world external debt, are responsible for more than 70 per cent of global annual deforestation.² The debt burden provides an inducement to liquidate forest capital for much-needed foreign exchange. Debt service requirements also provide a justification for expanding export crop production into forest areas.

18. The boreal forests provide one of the world's clearest examples of the link between the high consumption, late twentieth century industrial society and the impact on natural ecosystems. Today, one fifth of the world's population uses 85 per cent of natural resources. Generally, the demands of consumption for paper, timber, metals and energy provide the incentive to exploit natural resources too quickly and too intensively. High consumption is intimately related to industrialization, both driving industry and in turn being driven by advertising and a shift to disposable and short-life products. Lack of local control is another important problem, alienating people from the land and resulting in top-down decisions that may not be suitable for local conditions. In Eastern Europe, on the other hand, the sudden development of land from state to private control is seen as a problem, encouraging short-term exploitation by new owners who often have no prior experience in forest management.

III. Outcome of the joint government-non-governmental organizations initiative to contribute to the Intergovernmental Forum on Forests

19. The joint government-non-governmental organizations initiative for addressing the underlying causes of deforestation and forest degradation constituted an extensive participatory process which was guided by more than 40 case studies, many substantive articles and papers, and contributions from all over the world.

A. Outcome of the regional workshops and indigenous peoples meeting

20. The joint Government-NGOs Initiative on underlying causes of deforestation included the preparation and presentation of case studies from different regions of the world in seven regional consultations and one meeting of indigenous people. Presentations provided the basis for the identification of the common underlying causes of deforestation and forest degradation, followed by the identification of actions and solutions to address them. The process involved the participation of local community representatives, non-governmental organizations, academics, government officials and representatives from international and to a lesser extent business organizations.

21. The eight workshops and the more than 40 case studies reflect a wide range of causes, actors and possible solutions in extremely diverse social, political, economic, cultural and environmental contexts. However, they coincided in the identification of a number of key causes, which are at the root of deforestation and forest degradation processes in all types of forests. Important similarities were also identified regarding a number of actors — both domestic and international — which are part of the problem and therefore can become part of the solution. The categories of issues identified are summarized below.

Land tenure issues

22. Many of the case studies and regional workshops identified issues related to land tenure as a major underlying cause. Although situations vary widely, the following can be highlighted as the most common:

(a) The non-recognition of the territorial rights of indigenous and other traditional people, resulting in the invasion of those territories by external actors;

- (b) The lack of legally recognized land titles by local communities;
- (c) Government-led or spontaneous colonization processes into the forests, stemming from inequitable land-tenure patterns in agricultural areas;
- (d) Privatization of forests for the benefit of large-scale private or corporate landowners.

Resource management

23. The way in which natural resources are managed at the national level — expressed in explicit or implicit policies — was also identified as a major underlying cause. Most of these policies result in negative impacts and conflict with other policies and practices aimed at forest conservation. Among the most common are the following:

- (a) Lack of recognition of multiple values of forests, which are either visualized only as a source of wood materials or as occupying land which could be dedicated to other activities, such as agriculture or cattle-raising;
- (b) Lack of empowerment and participation of local communities in decisions over forest management;
- (c) The promotion of large-scale development projects with high negative impacts on forests;
- (d) Economic and other incentives which result in deforestation;
- (e) Issues of governance, including corruption, human rights abuses, inadequate enforcement of existing laws, and lack of institutional capacity to adequately manage forests;
- (f) Dominance of industry's interest in products which affect forests, including timber, pulp and paper, mining, oil and shrimp farming.

Trade issues

24. Trade — both national and international — is neither good nor bad in itself. However, it was identified as a major underlying cause (particularly within the current trade liberalization process) linked to other underlying causes, such as:

- (a) Unsustainable extraction of forest products;
- (b) Substitution of forests by other productions, particularly aimed at the international market, such as pulpwood and other tree plantations, cattle-raising and shrimp farming;
- (c) Rising consumer demand resulting in unsustainable consumption patterns of a wide variety of products extracted either from forests or from productive activities which substitute forests;
- (d) Undervaluation of forest products.

International economic relations

25. Practically all regional workshops identified underlying causes stemming from the current market-economy model but with different levels of importance, following the high consumption-low consumption (or rich-poor) country divide. Among the major identified underlying causes were:

- (a) Macroeconomic policies imposed on less developed countries, including structural adjustment programmes;

- (b) External debt and its service/repayment;
- (c) Unfair trade relationships;
- (d) Poorly directed foreign aid programmes;
- (e) Lack of regulation of transnational companies in both "home" and "host" countries.

Social exclusion

26. Social exclusion, as the process that marginalizes a large part of the population from the mainstream of development, was identified as an underlying cause, but not with the high profile received in the past. It was identified as a consequence of a number of national and international policies which resulted in the creation and increase of social exclusion, which in turn resulted in unsustainable use of forest lands. Regarding population growth, only one workshop considered it as an underlying cause, while several case studies mentioned it as being important.

27. It should be noted that underlying causes categorized in one group are influenced by underlying causes categorized in other groups. Each category at least helps to clarify in each case who the main actor could be to address the different underlying causes — a national Government, a group of Governments, international organizations or the international community as a whole.

28. The processes carried out under the initiative seem to agree in concluding that, to address deforestation and forest degradation, there is a need to:

- (a) Identify the chain of causality in each country, with the informed participation of all stakeholders;
- (b) Create democratic mechanisms for stakeholder participation in decision-making about resource management, including the promotion of equitable land-tenure systems;
- (c) Introduce changes to national international macroeconomic policies, including changes to the current trade liberalization process;
- (d) Modify current unsustainable consumption patterns.

29. Responsibility for the above issues is in the hands of many actors, including Governments, civil society, multilateral institutions, research organizations and bilateral aid agencies. Within such a wide range of actors, there is a need to coordinate a process leading to agreements on specific commitments for addressing underlying causes at both the national and international levels.

B. Results of the Global Workshop on Underlying Causes of Deforestation and Forest Degradation

San José, Costa Rica, 18–22 January 1999

30. The Global Workshop was attended by a diverse group of participants representing Governments, international and non-governmental organizations, local communities, indigenous peoples, academia, trade unions and the private sector. The Workshop was hosted by the Government of Costa Rica and organized by an organizing committee composed of UNEP, Governments, and non-governmental organizations. The workshop was successful in formulating a wide range of innovative actions.

31. In addition, the Workshop identified several underlying causes that are not part of the deliberations in IFF. The Workshop noted that underlying causes, be it in tropical forests or temperate forests, often lie outside the forest sector. Its final report, including recommendations, specific actions and actors, will be made available to IFF at its third session.

32. The Workshop identified a set of categories for urgently needed actions in order to address effectively the underlying causes of deforestation and forest degradation; they are described in the table.

Urgent actions required to address effectively the underlying causes of deforestation and forest degradation^a

<i>Category</i>	<i>Actions</i>
1. Trade and consumption	1.1. Change unsustainable consumption and production patterns 1.2. Implement voluntary certification for sustainable forest management 1.3. Improve imbalance of international trade and sustainable development regimes
2. Improving indigenous local peoples', communities' and other stakeholders' involvement in general, and solving inequities in land tenure in particular	2.1. Favour indigenous peoples' rights and the collective rights of local communities to access, use and manage natural resources, land and territories 2.2. Improve transparency and accountability and land tenure 2.3. Design legal instruments consistent with indigenous peoples' and local communities' rights
3. Resolving investment aid policies/policies and financial flows	3.1. Change inappropriate development strategies, design new structural adjustment programmes and strengthen government capacity 3.2. Address debt servicing and debt creation issues 3.3. Eliminate perverse incentives and subsidies 3.4. Increase private capital flows for sustainable forest management 3.5. Address governance and corruption problems 3.6. Strengthen national institutions, and improve policy implementation and regulation
4. Valuation	4.1. Recognize the cultural values of forests 4.2. Recognize land tenure rights, especially community and collective rights 4.3. Improve valuation of community forestry and non-timber forests products 4.4. Recognize the value of forests as ecosystems

^a Based on the report of the Global Workshop on Addressing the Underlying Causes of Deforestation and Forest Degradation, San José, 18–22 January 1999.

IV. Conclusions and proposals for action

Conclusions

33. The underlying causes of deforestation and forest degradation are deeply ingrained in the totality of national and international policies, economic and development plans. Strategies to arrest the underlying causes must be sought in the broader policy framework of development.
34. The social and economic consequences of deforestation are many, often having devastating long-term impacts. Destruction of forests leads to the disappearance of all potential future revenue and future employment that could be derived from their sustainable management for timber and non-wood products. The most short-sighted ecological consequence of deforestation is the loss of biodiversity, which means the extinction of species, varieties of plants and animals, many of which may have never been scientifically documented. Economically, the loss of forest biodiversity, an important part of earth's basic life support system, is eroding the potential base for future human development.
35. Global consumption and the market that services it has become the main engine of the global economy. With the most wealthy 20 per cent of the population consuming 85 per cent of the world's resources, levels of consumption continue to climb. Markets are volatile and often ephemeral, discouraging long-term investments in prudent resource use and encouraging short-term planning and exploitation practices. Timber extraction is considered by some to be the main cause of forest loss in tropical frontier forests.
36. Many other commodities traded on the world market are also linked with forest loss. Minerals, oil, shrimps and cocoa are examples of commodities that are often extracted or grown in areas cleared from forests. Yet many other cash crops cultivated outside forests also lead to forest loss by displacing peasant farmers from the best agricultural land and forcing them into the forests in search of a livelihood. Land concentration and the creation of wealthy elites with significant influence in national economies are often driven by international markets in cash crops. The economic policies currently being promoted encourage deregulation and increasing private-sector investment in export-oriented production. International legal regimes developed under the General Agreement on Tariffs and Trade and the World Trade Organization may discourage countries from restricting trade on environmental grounds since they are considered "non-tariff barriers" to free trade. This has made the regulation of trade to prevent forest destruction difficult, and has further increased the power and influence of the free trade lobby.
37. In many developing countries, control and ownership of forests have made a rapid transition from communities to States to the private sector. Today, 50 of the largest forest products corporations between them control some 140 million ha of forests, an area the size of the total forest estate of Europe. The private sector has an important role to play in forest policy development and implementation, including issues related to pollution control, forest conservation and protected areas, and land-use policies.
38. Most aid budgets to recipient countries are determined by macroeconomic considerations as a means of securing the economies of recipient countries through adjusting balance of payments and facilitating debt servicing. Development assistance may thus have very broadly defined goals, and those planning these large disbursements of money may not always integrate environmental considerations into such grants and loans. Structural adjustment lending, which aims to promote exports and cut back national expenditures, has often indirectly encouraged the intensification of forest utilization, without measures being simultaneously taken to strengthen Governments' regulatory capacity.

Proposals for action

39. The Intergovernmental Forum on Forests may wish to urge and encourage countries to:

- (a) Identify, with support from international organizations and with the informed participation of all stakeholders, the chain of causality in each country of the underlying causes of deforestation and forest degradation;
- (b) Create democratic mechanisms for stakeholder participation in decision-making about resource management, including the promotion of equitable land-tenure systems;
- (c) Support land regulation as a means to clearly define land ownership and rights for the use of forest resource;
- (d) Develop mechanisms to improve land access and the use of forests resources by small-scale owners;
- (e) Train human resources so as to build leadership capacity in communities for sustainable forest management;
- (f) Provide technical guidance, legal instruments and economic incentives on sustainable forest management and environmental management at the community level;
- (g) Identify and measure the impact of perverse subsidies and incentives in the forest and non-forest sectors (particularly agriculture, mining and hydropower), which may contribute to deforestation and forest degradation;
- (h) Request international financial organizations to analyse impacts of foreign debt on forest resources, and in cooperation with donor countries, to explore innovative debt reduction reward schemes for countries that take significant steps to halt deforestation and forest degradation.

Notes

¹ Food and Agriculture Organization of the United Nations, *State of the World Forests, 1997* (Rome, 1998).

² See World Bank, *World Development Report, 1998/99* (Washington, D.C., Oxford University Press, 1998); and United Nations Development Programme, *Human Development Report, 1998* (New York, Oxford University Press, 1998).



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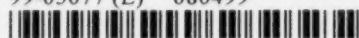
**Matters left pending and other issues arising from the
programme elements of the Intergovernmental Panel on
Forests process**

**Issues that need further clarification: traditional forest-
related knowledge**

Report of the Secretary-General

Summary

The present report is based on input received from the secretariat of the Convention on Biological Diversity, as lead agency within the informal high-level Inter-Agency Task Force on Forests. It addresses the mandate for this programme element, as decided by the Intergovernmental Forum on Forests at its first session, as well as the guidance received at the Forum's second session. The report describes the process under the Convention on Biological Diversity relevant to traditional forest-related knowledge; discusses the identification and promotion of traditional forest systems; considers the application and development of legal and other forms of protection for traditional forest-related knowledge; and reviews the consistency between intellectual property rights in the Convention on Biological Diversity and agreements under the World Trade Organization.



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I. Introduction

1. Traditional forest-related knowledge can be considered to encompass the following:

- (a) Information about the components of a particular forest ecosystem, such as its soils, trees, animals, streams, hunting grounds, old fallows and sacred sites;
- (b) Rules for using them;
- (c) Relationships among their different users;
- (d) Technologies for using them to meet the subsistence, health, trade and ritual needs of local people;
- (e) A view of the world that makes sense of such information, rules, relationships and technologies in the context of a long-term and holistic perspective in decision-making.

2. These aspects of traditional forest-related knowledge have different kinds of meaning for global society, and can be used in various ways. Data derived from traditional knowledge about forest ecology or the behaviour and growth rates of forest organisms, for example, might suggest new ways to design, implement and monitor forest management systems. Sharing this knowledge might help forest managers to avoid procedures that impact unfavourably on local social systems. Traditional methods and rules on how to grow and harvest forest organisms or to use forest soils without damaging them might help to improve forestry and agroforestry systems. Traditional technologies may be more environmentally or socially benign than newer technologies, and might be adapted and used more widely. Finally, a traditional worldview that stresses linkage among natural and human phenomena and that values intergenerational equity and future well-being could promote sustainable development.

A. Mandate

3. Programme element II.d (ii), was defined by the Intergovernmental Forum on Forests (IFF) at its first session as follows:

"Consider other issues from the programme elements of the Intergovernmental Panel on Forests (IPF) process needing further clarification ... inter alia ... traditional forest-related knowledge, consistent with, inter alia, the terms of the Convention on Biological Diversity ..." (see E/CN.17/1997/4, para. 7, category II. (d)).

Work under this programme element is also guided by the outcome of IFF at its second session.

B. Guidance from the outcome of the second session of the Intergovernmental Forum on Forests

4. At its second session, IFF noted the decisions relevant to traditional forest-related knowledge made at the fourth meeting of the Conference of Parties to the Convention on Biological Diversity, as they relate to the implementation of the proposals for action of IPF. The Forum also noted the importance of ensuring an adequate treatment and a coordinated development of actions regarding traditional forest-related knowledge both under the Convention and in the future sessions of IFF, as well as between these two forums. The need for urgent and effective implementation of the IPF proposals for action dealing with important aspects of traditional forest-related knowledge, taking into account the Convention process, was also noted.

C. General overview of the conclusions and proposals for action of the Intergovernmental Panel on Forests

5. In its conclusions and proposals for action at its fourth session (see E/CN.17/1997/12), IPF recognized that traditional forest-related knowledge constitutes an important body of knowledge and experience. It should be broadly defined to include not only knowledge of forest resources but also knowledge of other issues that are considered relevant by countries based on their individual circumstances.

6. The Panel also recognized that traditional forest-related knowledge could play an important role in sustainable forest management, and that its potential to support actions should be reflected in national forest programmes. The proposals for action urged countries to provide opportunities for the participation, *inter alia*, of traditional forest-related knowledge-holders in the planning, development and implementation of national forest policies and programmes; to recognize and support traditional resource use systems incorporating traditional forest-related knowledge; and to identify ways to inventory, store, catalogue and retrieve traditional forest-related knowledge. This would also involve measures to rehabilitate and protect traditional forest-related knowledge, as well as develop

mechanisms to ensure the fair and equitable sharing of benefits arising from the use of traditional technologies.

7. The Panel invited countries to promote activities, such as research, aimed at advancing international understanding and wider use of traditional forest-related knowledge. The proposals for action also called for additional pilot studies on the relationship between intellectual property rights systems and traditional forest-related knowledge, and for policy, institutional and legal frameworks required to support the application of intellectual property rights and/or other protection regimes for traditional forest-related knowledge.

8. The Panel also invited the World Intellectual Property Organization (WIPO), together with the United Nations Conference on Trade and Development (UNCTAD), to undertake a study aimed at advancing international understanding of the relationship between intellectual property and traditional forest-related knowledge, and to develop ways and means to promote effective protection of traditional forest-related knowledge.

D. Scope

9. The present report aims to provide information regarding the process under the Convention on Biological Diversity on traditional forest-related knowledge focusing on such matters as:

(a) Application and development of legal and other forms of protection for the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of forest biological diversity;

(b) Legislative, policy and administrative measures; good practices of conservation and sustainable use of biological diversity; equitable sharing of benefits, including case studies on access to forest genetic resources; and benefit-sharing arising from the use of those genetic resources;

(c) Consistency between intellectual property rights and relevant provisions of the Agreement on Trade-related Aspects of Intellectual Property Rights and the Convention.

10. The report concludes with preliminary conclusions and proposals for action for the consideration of the Forum.

II. Implementation processes of the Convention on Biological Diversity in the area of traditional forest-related knowledge

11. At its second session the Forum requested information on the implementation processes of the Convention on Biological Diversity in the area of traditional forest-related knowledge. The present section gives a brief overview of the different articles, decisions and work programmes of the Convention that would be relevant to the work of IFF on traditional forest-related knowledge.

A. Relevance of article 8 (j) of the Convention

12. The importance of traditional knowledge in the conservation and the sustainable use of biological diversity is mainly recognized by the Convention on Biological Diversity in its article 8 (j), which stipulates that:

“Each Contracting Party shall, as far as possible and as appropriate:

Subject to its national legislation, respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices”.

13. Article 8 (j) is also directly related to three other provisions of the Convention: article 10 (c), dealing with customary use of biological resources; article 17.2, dealing with exchange of information relevant to “indigenous and traditional knowledge”; and articles 18.4 and 15, dealing with technical and scientific cooperation, including indigenous and traditional technologies and access to genetic resources, respectively. In the process of the implementation of the Convention, those four provisions are usually considered together.

14. In the Convention on Biological Diversity, traditional forest-related knowledge, is seen as a subset of the knowledge, innovations and practices referred to in article 8 (j). The Panel recognized that the conservation and sustainable use of biodiversity and the fair and equitable

sharing of benefits derived from research and development and from the commercial utilization of biological resources fell, *inter alia*, within the purview of the Convention. It also recognized the need to avoid duplication or overlap with other international processes.

B. Consideration of the decisions made at the fourth meeting of the Conference of Parties to the Convention relevant to traditional forest-related knowledge

15. The Forum, at its second session, noted in particular the relevance of some decisions of the fourth Conference of Parties to the Convention on Biological Diversity to traditional forest-related knowledge, and emphasized the need for implementation of the proposals for action of IPF.

16. The Convention established, early on, a process to ensure that knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity were considered in all relevant sectoral and thematic areas in the implementation of the Convention.

17. It was at the fourth meeting of the Conference of Parties, held at Bratislava in May 1998, that the issue of traditional forest-related knowledge was addressed and the work programme on forest biological diversity was adopted. The Conference also took decisions that do not directly deal with traditional forest-related knowledge, *per se* but could influence the development of this issue substantially, such as decisions IV/9 establishing, *inter alia*, an ad hoc open-ended inter-sessional working group on the implementation of article 8 (j); IV/8 on matters related to benefit-sharing, which, *inter alia*, established a panel of experts on access to genetic resources and benefit-sharing; IV/15 on the relationship of the Convention with, *inter alia*, the Commission on Sustainable Development and biodiversity-related conventions, concerning the development of a common appreciation of the relationship between intellectual property rights-relevant provisions of the Agreement on Trade-related Aspects of Intellectual Property Rights and the Convention; and IV/9, which invited WIPO to take traditional knowledge into account in its work.

18. An overview of these decisions and their implications were contained in the note by the Secretariat on programme element II.d (I) submitted to IFF at its second session (E/CN.17/IFF/1998/10). The present report will focus on two of the above decisions, namely IV/7 and IV/9.

1. Decision IV/7 on forest biological diversity

19. Decision IV/7 on forest biological diversity, together with the work programme for forest biological diversity, are particularly relevant to the IFF process and IPF proposals for action on traditional forest-related knowledge.

20. The objectives of the work programme for forest biological diversity that relate the most to traditional forest-related knowledge are aimed at:

(a) Identifying traditional forest systems of conservation and sustainable use of forest biological diversity, and promoting the wider application, use and role of traditional forest-related knowledge in sustainable forest management and the equitable sharing of benefits;

(b) Identifying mechanisms that facilitate the financing of activities for the conservation and incorporation of traditional knowledge and sustainable use of forest biological diversity.

21. In order to achieve its objectives, the work programme contains four elements of work identifying certain relevant activities. The first element, which is research-oriented, is of direct relevance to traditional forest-related knowledge, and includes:

Holistic and intersectoral ecosystem approaches that integrate the conservation and sustainable use of biological diversity, taking account of social and cultural and economic considerations.

22. Among the identified activities, it is proposed to, *inter alia*, develop methodologies to advance the integration of traditional forest-related knowledge into sustainable forest management. It is of particular interest to note that the integration of social, cultural and economic considerations into the conservation and sustainable use of forest biological diversity will bring the concept close to the objectives of sustainable forest management; thus, the issue should also be dealt with thoroughly in other forums, mainly within IFF.

23. The anticipated outcomes of these activities, of particular relevance to the Forum, are the following:

(a) A better understanding of the ecosystem approach as it relates to forest biological diversity, and an elaboration of the linkages to other work under the Convention;

(b) Further guidance by the Convention on Biological Diversity to IFF, other relevant forums and conventions.

2. Decision IV/9 on implementation of article 8 (j) and related provisions

24. As part of the process to ensure the consideration of traditional knowledge in all areas of the implementation of the Convention, the fourth Conference of Parties to the Convention adopted decision IV/9 on implementation of article 8 (j). The decision is based, in part, on the outcome of the inter-sessional workshop on article 8 (j) held at Madrid in November 1997. The decision established an ad hoc open-ended inter-sessional working group to address the implementation of article 8 (j) and related provisions to:

(a) Develop a programme of work and initiate both short and medium-term activities in this programme to facilitate the work of the Parties in the implementation of article 8 (j) and related provisions;

(b) Further advance the issue concerning the need to find ways and means for the protection of traditional knowledge, innovations and practices, by inviting case studies addressing this issue;

(c) Seek ways to enhance the cooperation between the Convention and the World Intellectual Property Organization, including through the negotiation of a memorandum of understanding.

25. The first meeting of the ad hoc open-ended inter-sessional working group is scheduled to take place at Montreal in January 2000. However, information in the form of case studies and other documents submitted in response to decision IV/9 will be directly relevant to the protection and application of traditional forest-related knowledge in sustainable forest management.

C. Other considerations relevant to traditional forest-related knowledge arising from decisions made at the fourth meeting of the Conference of Parties to the Convention

26. Four other decisions made at the fourth meeting of the Conference of Parties contain items of relevance to traditional forest-related knowledge, namely sharing of benefits, the ecosystem approach, the global taxonomy initiative and the review of article 27.3 (b) of the Agreement on Trade-related Aspects of Intellectual Property Rights (this last issue is considered under section II below).

1. Sharing of benefits

27. The fourth Conference of Parties adopted a decision on access and benefit-sharing, which established a regionally balanced panel of experts appointed by Governments, composed, among others, of representatives from the private and public sectors, as well as representatives of indigenous and local communities. The panel is to develop a common understanding of basic concepts and explore options for access and benefit-sharing. These options could include guiding principles, guidelines and codes of best practice for access and benefit-sharing arrangements. The Conference of Parties also requested the financial mechanism of the Convention to give special emphasis to benefit-sharing initiatives, such as funding for entrepreneurial activities by local and indigenous communities (decision IV/8).

2. Ecosystem approach

28. The ecosystem approach is recognized by the Conference of Parties to the Convention as a framework for analysis and implementation of the objectives of the Convention, as well as for its various thematic and cross-cutting work programmes (decision IV/1.B). While the Conference of Parties has yet to develop principles and guidelines for the ecosystem approach, it is worth noting that a workshop held at Lilongwe, Malawi, in January 1998, identified 12 guiding principles characterizing the ecosystem approach. In particular, principles 2 and 11 are of direct relevance to traditional knowledge in general and traditional forest-related knowledge in particular. They state:

(a) That management should be decentralized to the lowest appropriate level, the rationale being that decentralized systems can lead to greater efficiency, effectiveness and equity. The closer the management is to the ecosystem, the greater is the responsibility, accountability, participation and use of local knowledge (principle 2);

(b) That the ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices, because information from all sources is critical to arriving at effective ecosystem management strategies (principle 11).

3. Global taxonomy initiative

29. At its fourth meeting, the Conference of the Parties adopted a comprehensive decision regarding the implementation of a global taxonomy initiative. This major undertaking will require action by various players and different levels, and will have to consider, take into account

and make available, indigenous and traditional knowledge while developing the global taxonomy (decision IV/1.D).

D. Implementation processes of the Convention in the area of traditional forest-related knowledge

30. As outlined above, the Conference of the Parties has initiated a comprehensive and cross-cutting process for the implementation and consideration of article 8 (j) and related provisions, in all relevant sectors and thematic areas of the Convention. Traditional forest-related knowledge is dealt with specifically in the programme of work on forest biological diversity but is also the subject of more general processes undertaken within the Convention. For example, case studies submitted on the implementation of decision IV/9 may include those submitted by forest-dependent indigenous and local communities. Such case studies would not only be directly relevant to the programme of work on forest biological diversity and associated traditional forest-related knowledge, but also to defining general guidelines and principles emerging from examples of best practice.

31. Thus, within both the general context of article 8 (j) and the particular context of traditional forest-related knowledge, the Convention has initiated the following processes:

(a) Establishing the ad hoc open-ended inter-sessional working group to address the implementation of article 8 (j) and related provisions, as well as defining its mandate for short and medium-term activities;

(b) Inviting case studies on a number of topics directly relevant to the implementation of article 8 (j), but also in other thematic areas, such as those concerning impact assessment and minimizing adverse impacts;

(c) Communicating with other intergovernmental and international agencies, particularly IFF, WIPO, UNCTAD, the World Trade Organization (WTO), the Food and Agriculture Organization of the United Nations (FAO), the Commission on Human Rights, and the United Nations Educational, Scientific and Cultural Organization (UNESCO) to seek cooperation and collaboration and avoid duplication and overlap of work, to be gained through formal arrangements, such as memoranda of understanding.

III. Major issues

A. Identification of traditional forest systems of conservation and sustainable use of forest biological diversity, and their promotion in accordance with the provisions of the Convention

32. In order to advance international understanding of the role of traditional forest-related knowledge in the management, conservation and sustainable development of all types of forests, it is important to address three important issues. It will be critical first, to find and document examples of such knowledge "at work"; second, to find examples of successful collaboration and integration of traditional forest-related knowledge with scientific management systems; and third, to disseminate these examples through appropriate mechanisms. These activities must take place with the approval and involvement of the holders of traditional forest-related knowledge. Due regard also has to be given to equitable benefit-sharing arrangements, as well as to protocols or codes of access. As noted by IPF, there are several difficulties associated with the storage, retrieval and dissemination of any such knowledge held in databases.

33. In order to address these important aspects of the role of traditional forest-related knowledge in sustainable forest management, the Conference of the Parties to the Convention on Biological Diversity has initiated a process to identify traditional systems of forest conservation and sustainable use, while synthesizing case studies documenting the interactions between traditional and other forms of knowledge for the sixth meeting of the Conference of Parties.

34. While to date the Conference of the Parties to the Convention on Biological Diversity has not considered the need to define or identify what constitutes either an indigenous community or a local community for the purposes of implementing article 8 (j), there are many local communities in developed countries, for example in Europe, which because of their access to and use of advanced technologies would not normally be considered as embodying traditional lifestyles but which nevertheless have retained and exercised their traditional knowledge regarding forest management for many centuries. There might be a need to facilitate the flow of these types of communities' concerns into the international forest policy dialogue and to the Convention.

B. Application and development of legal and other forms of protection for traditional forest-related knowledge

35. In many of its decisions, the Conference of Parties in the Convention on Biological Diversity has given priority to the protection of traditional knowledge of indigenous and local communities. For example, the Conference of Parties has recognized the importance of making intellectual property-related provisions of article 8 (j) and provisions of other international agreements relating to intellectual property mutually supportive. The Conference of Parties welcomed the decision of WIPO to incorporate biodiversity-related issues under its 1998–1999 main programme item 11 (Global intellectual property issues), and requested the Executive Secretary to seek ways to enhance cooperation between the Convention on Biological Diversity and WIPO on issues arising from article 8 (j) and related provisions.

36. In fact, several important activities have been launched or are considered by a number of United Nations agencies to be focused on achieving various degrees of protection for the traditional knowledge of indigenous and local communities. They include:

(a) The first meeting of the ad hoc open-ended inter-sessional working group on article 8 (j) and related provisions, as already mentioned, established pursuant to paragraph 1 of decision IV/9 of the Conference of Parties, scheduled to take place in January 2000;

(b) WIPO initiated in 1998 fact-finding missions to identify and explore the intellectual property needs, rights and expectations of holders of traditional knowledge in order to promote the contribution of the intellectual property system to their social, cultural and economic development. These missions used as their starting point the definition of traditional knowledge and innovations from article 8 (j). In 1998, WIPO also convened a round table on intellectual property and indigenous people. A report on the fact-finding missions is soon to be released;

(c) Ongoing negotiations under the auspices of the FAO Commission on Genetic Resources for Food and Agriculture on the revision of the International Undertaking on Plant Genetic Resources for Food and Agriculture, to bring it into harmony with the Convention on Biological Diversity, which entails, *inter alia*, consideration of the issues of access to plant genetic resources for food and agriculture and the realization of farmers' rights. This is scheduled to be completed in 1999, and will be submitted to the Conference of the Parties for its consideration;

(d) The review of the Agreement on Trade-Related Aspects of Intellectual Property Rights (article 27.3 (b)) is further discussed below.

1. Relationship between intellectual property rights and traditional forest-related knowledge

37. Traditional knowledge, innovations and practices are generally seen as communal in character and passed on from one generation to the next as part of a community's frequently oral tradition. Within traditional communities, there are usually rights and responsibilities regarding such knowledge and protocols for its use according to customary law. Standard forms of intellectual property protection have been largely derived from Western legal traditions and its particular notions on private property and ownership rights.

38. Concerns with this situation and the consequences it has for the effective implementation of the Convention on Biological Diversity made the Conference of Parties initiate a process which would lead to more effective recognition, promotion and protection of traditional knowledge systems. Parties that have not already done so have been requested to develop national legislation and corresponding strategies for the implementation of article 8 (j) in consultation with, in particular, representatives of indigenous and local communities. Governments and relevant international and regional organizations have been encouraged to conduct case studies, and communicate these to the Executive Secretary of the Convention on the impacts of intellectual property rights on the achievement of the objectives of the Convention, including relationships between intellectual property rights and the traditional knowledge of indigenous and local communities (decisions III/14 and III/17 of the Conference of Parties).

2. International instruments and national legislation pertaining to the protection and use of traditional forest-related knowledge

39. A number of Governments have implemented national legislation in direct response to the Convention on Biological Diversity, which involves mechanisms for the protection of traditional knowledge. Much of this legislation recognizes that the principles of prior informed consent also apply to the traditional knowledge of indigenous and local communities.

40. Article 15.5 of the Convention on Biological Diversity requires that access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party. The principle of prior informed consent is also embedded in

the wording of article 8 (j), whereby, subject to national legislation, the wider application of the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity should only occur with the approval and involvement of the holders of such knowledge, innovations and practices.

3. Ways and means for the effective protection and use of traditional forest-related knowledge

41. Much attention has already been focused on finding ways and means to protect communally-based traditional knowledge systems, including traditional forest-related knowledge systems. These could include making appropriate amendments to existing forms of intellectual property rights; implementing new administrative procedures (for example, with regard to the patent application process); and using alternative standard forms of legal protection rather than by legislation (for example, material transfer agreements, biodiversity contracts and licencing agreements). Others could involve the application of common law principles (for example, breach of confidentiality); principles regarding ethical conduct (for example, with regard to bio-prospecting); and the accommodation of indigenous and local community customary law systems within national legal systems. They may also take into account the application of appropriate *sui generis* legislation (for which a number of models now exist), as well as using provisions under existing national and subnational laws governing such matters as land tenure, cultural heritage and local government, which frequently contain provisions for regional agreements and permit regimes (governing access to indigenous/local community lands, research and collection of components of biological diversity etc.).

4. Repatriation of information

42. The Intergovernmental Panel on Forests, in its proposals for action, recognized that indigenous people and forest-dependent people who possess traditional forest-related knowledge could play an important role in sustainable forest management, and urged countries, in implementing their forest programmes, to take measures to rehabilitate and protect traditional forest-related knowledge, taking into account that an essential condition for the effective protection and rehabilitation of traditional forest-related knowledge is the integrity and cultural survival of forest-dependent people. The Convention on Biological Diversity, in its article 17.2, provides for Contracting Parties to facilitate the exchange of information, and provides that

such exchange of information shall include, where feasible, the repatriation of information.

43. Most of the information on traditional knowledge, as well as on traditional forest-related knowledge, is stored in many different places, such as research libraries of universities, public and private museums, corporations, public and church archives or departmental archives. They are frequently located thousands of kilometres away, sometimes across national borders, from the communities where this knowledge originated.

44. When repatriation processes are planned to be undertaken, it is crucial that the information is provided in a form which is accessible to the indigenous and local communities of origin. A major benefit of this information is to enable indigenous and local community elders to recall knowledge and revitalize traditions, especially in cases where various practices have lapsed through, for example, destruction of forest habitats, loss of key species, changes from subsistence to cash economies or forced removal from traditional lands. In many cases, such repatriation of traditional forest-related knowledge could be of great value for contributing to the enhancement of sustainable management of all types of forests.

C. Consistency between intellectual property rights and relevant provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights and the Convention on Biological Diversity

45. The Conference of Parties to the Convention on Biological Diversity, in its decision IV/15, addressed the issue of ensuring consistency and mutual supportiveness in implementing the Convention on Biological Diversity and the WTO agreements. This would be particularly desirable as regards article 27, paragraph 3 (b) of the WTO Agreement on Trade-related Aspects of Intellectual Property Rights and Convention article 16. The Conference of Parties invited the World Trade Organization to consider how to achieve the integration of biological diversity concerns and the protection of intellectual property rights.

46. However, further work is required to help develop a common appreciation of the relationship between intellectual property rights and the relevant provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights and the Convention. For the Convention and WTO to benefit from each other's work, there should be scope for them to synchronize the review of article 27.3 (b) to take place in

1999, the full Agreement on Trade-Related Intellectual Property Rights scheduled to take place in 2000, and the decisions and recommendations on this issue made at the fifth meeting of the Conference of Parties, in 2000.

47. The Agreement on Trade-Related Intellectual Property Rights, which provides for the international and national protection of those forms of intellectual property most relevant to the protection of traditional knowledge, namely patents, copyrights and related rights, trademarks, geographical indications and protection of undisclosed information (trade secrets), makes no specific mention of communally held knowledge/intellectual property, which generally characterizes the knowledge/intellectual property systems of indigenous and local communities. This is not to say, however, that the Agreement's regime cannot provide protection to certain kinds of knowledge held under such systems. It has been argued that certain forms of intellectual property rights, such as trademarks, geographical indications and trade secrets, can be used to protect communal rights. It has also been suggested that the disclosure of country/community of origin and communal knowledge as "prior art" may prevent the grant of a patent in relation to particular plants, or varieties of them, or processes involved in their application for human use. It has also been suggested that indigenous and local communities could form corporations that can then apply for and hold patents as legal entities, in much the same way as corporations in developed countries do under relevant national laws.

48. Some Parties to the Convention, who are also WTO members, are considering maintaining the provisions to exclude plants and animals from patenting through the development of *sui generis* systems for plant variety protection. This would allow countries to preserve the flexibility they desire to experiment with various approaches to the protection of traditional knowledge, including traditional forest-related knowledge and intellectual property rights regimes, and to allow for further evaluation of other complex and socio-economic issues in implementing article 8 (j). Given the complexity of the issues, many countries need to develop experience in resolving them through various pilot projects and programmes, and this will require a phase of experimentation. It should be noted that requiring all countries to uniformly recognize life patenting and requiring uniform systems of plant variety protection might impede countries from gaining the experience needed to effectively implement article 8 (j).

IV. Conclusions and proposals for action

49. To further the understanding of the role of traditional forest-related knowledge in sustainable forest management, there is a need to identify traditional systems that promote the management, conservation and sustainable development and use of forest biological diversity, in accordance with the provisions of the Convention on Biological Diversity and the IPF proposals for action.

50. The Intergovernmental Forum on Forests may wish to recommend that the Convention secretariat, as the lead agency for traditional forest-related knowledge within the Task Force, further explore the feasibility and modalities for promoting greater recognition and respect for traditional forest-related knowledge systems in sustainable forest management, including the identification and recording of traditional forest-related knowledge systems; the storage and appropriate location of such information; the formulation of appropriate protocols for accessing traditional forest-related knowledge; and compiling examples on the application of traditional forest-related knowledge, both on its own and in conjunction with other forms of knowledge relevant to the management, conservation and sustainable development and use of forest biological diversity.

51. Several processes, undertaken by different agencies, are relevant to the application and development of legal and other forms of protection for traditional forest-related knowledge and are also examining ways and means for providing protection for the traditional knowledge of indigenous and local communities.

52. The Intergovernmental Forum on Forests may wish to:

(a) Consider the establishment of a mechanism, in the form of a task force or specially convened panel of experts, to coordinate and synthesize the inputs of the various reviews and activities examining the issue of protection of traditional knowledge in order to achieve synergy and harmony among relevant instruments and their implementation;

(b) Recommend that the above mechanism include participation of, *inter alia*, the Convention on Biological Diversity, IFF, WTO, WIPO, FAO, the Commission on Human Rights, the International Labour Organization and UNESCO, and include experts invited from the relevant rosters of experts maintained by each of these agencies, as well as representatives of forest-dependent indigenous and local communities;

(c) Invite the Executive Secretary of the Convention to communicate with relevant international agencies, in particular those responsible within WTO for overseeing the review of article 27.3 (b) of the Agreement on Trade-Related Intellectual Property Rights, and to invite submissions and other relevant information concerning, *inter alia*, the protection of traditional knowledge, for the consideration of the working group on article 8 (j) at its first meeting, in January 2000.

53. There is a need to establish consistency between intellectual property rights aspects of traditional forest-related knowledge and the relevant provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights and the Convention on Biological Diversity.

54. The Intergovernmental Forum on Forests may wish to recommend that the review of article 27.3 (b) of the Agreement on Trade-Related Intellectual Property Rights be extended in order to take account of both the report and any recommendations and decisions which might arise from the fifth meeting of the Conference of Parties to the Convention. This would take into account the time that would be required for the establishment of the mechanism recommended above and the completion of its work.